SENSORS AND ELECTRON DEVICES
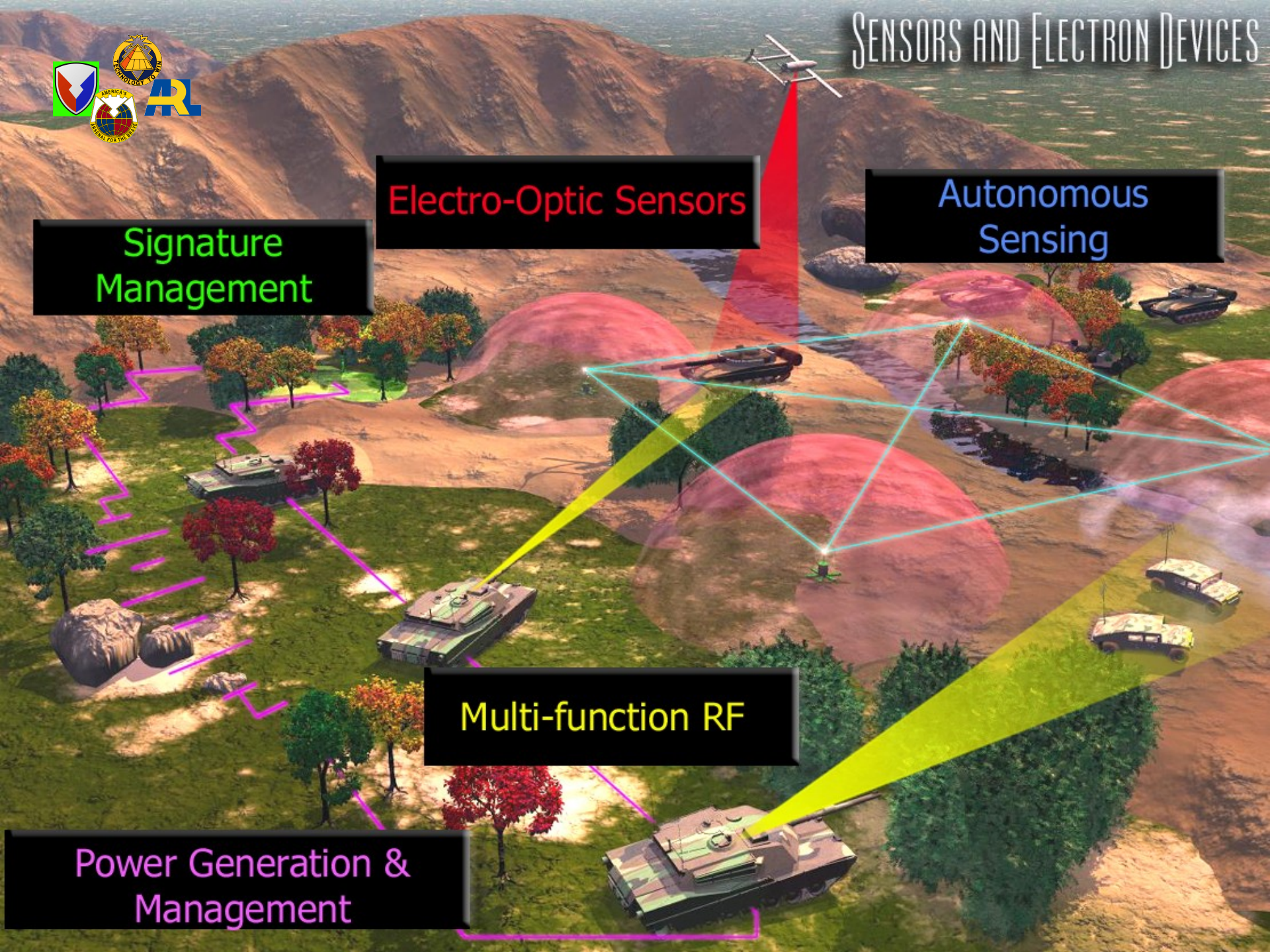
Electro-Optic Sensors

Autonomous Sensing

Signature Management

Multi-function RF

Power Generation & Management
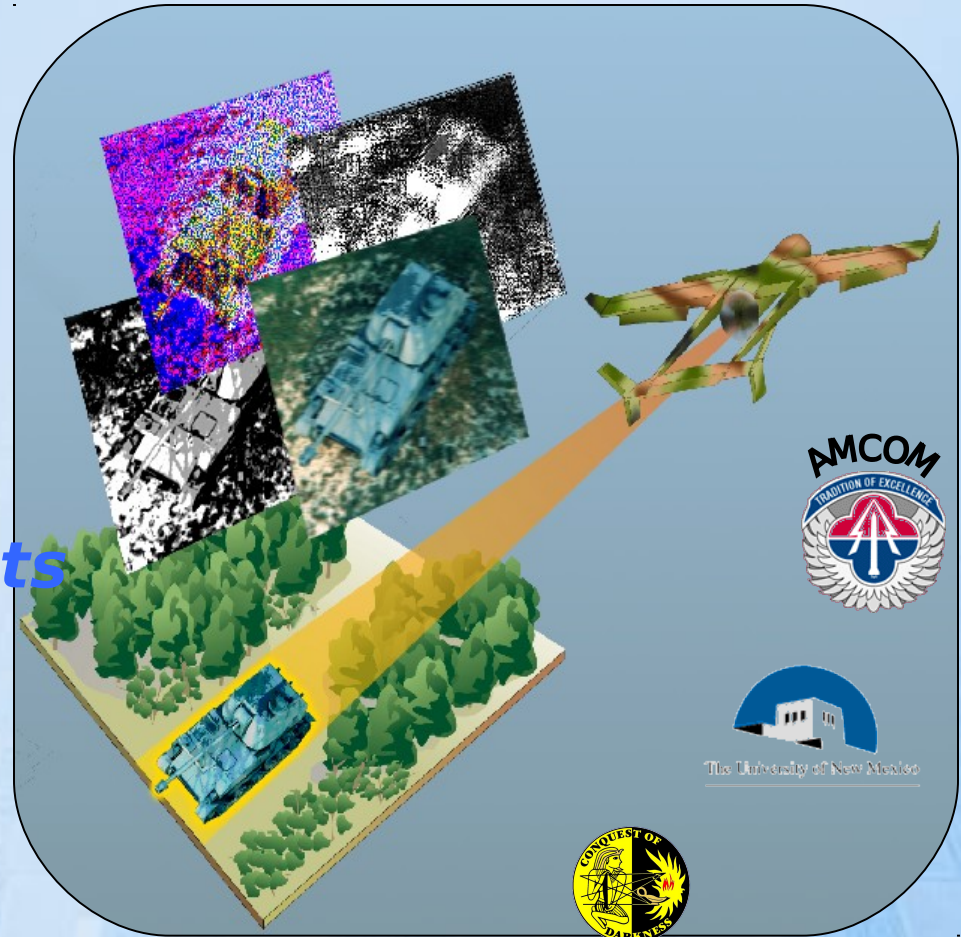
Electro-Optic Smart Sensors

Vision

Provide extraordinary daytime situation awareness and dominance of the battlefield during night and adverse weather situations.

Major Research Thrusts

Next-Generation IR Sensors/Imaging

EO for Survivability

High-Energy Laser Technology

EO Devices and Processing

Nanoscience R&D

AMCOM

The University of New Mexico

NVESD

EPIR

BAE SYSTEMS

UNIVERSITY OF MARYLAND

Stanford University

Multi-Function RF Thrust Area

Vision

Enhance the lethality, survivability, and mobility of the highly mobile future platforms through integration of multiple RF functions while reducing cost, complexity and volume.
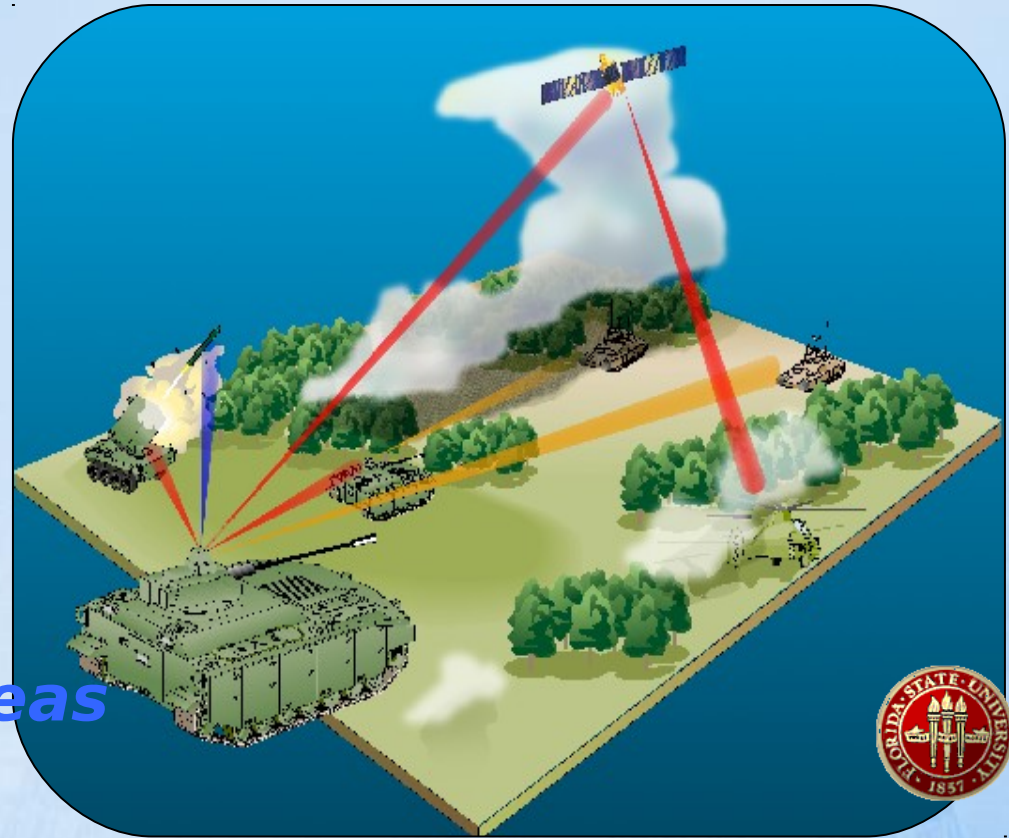
Major Research Areas

Devices
RF Components
MMW Sensor Technology
RF Models, Simulations, and Concepts
RF DEW Effects

BAE SYSTEMS

Georgia Institute of Technology

Northrop Grumman

DARPA

University of Michigan

Autonomous Sensing Thrust Area

Vision

Networks of very low cost sensor nodes using multiple types of sensors which can accurately locate & identify battlefield targets
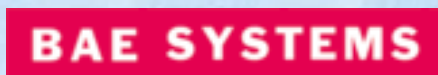
Major Research Areas

Imaging IR ATR
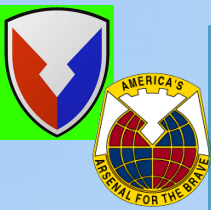**Acoustic Signal Processing**
Magnetic Sensors
Sensor Fusion
Sensor Integration

DRAPER LABORATORY

BAE SYSTEMS

DARPA

UCLA

Raytheon

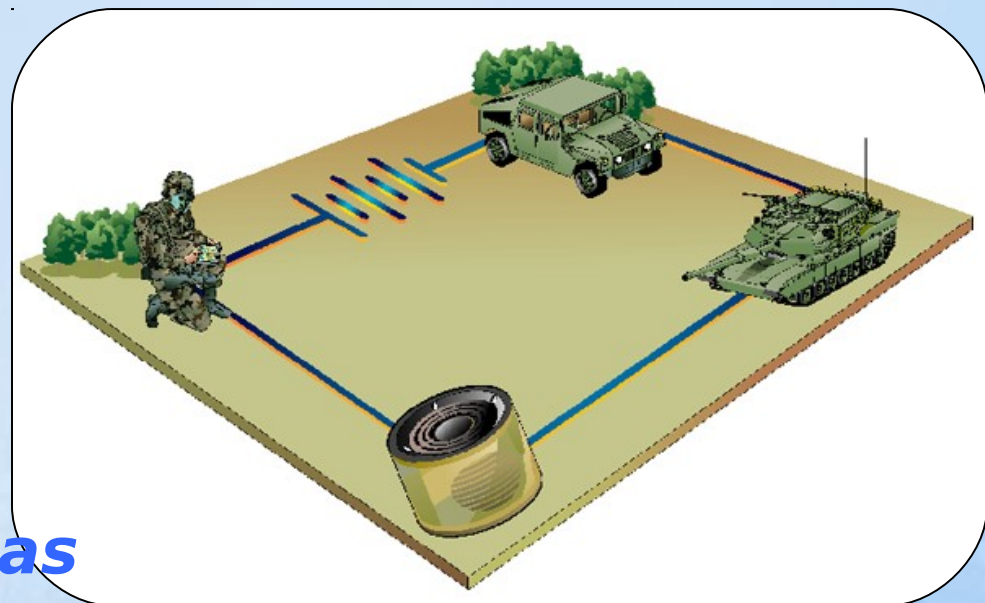Rockwell Science Center™

UNIVERSITY OF MARYLAND 1856

Power Generation Management Thrust Area

Vision

Research advanced technologies to support communications, transportation and all Mounted/Dismounted Army electric/electronic systems with dramatically more compact and efficient power sources and management.
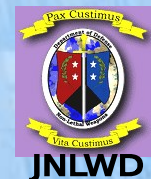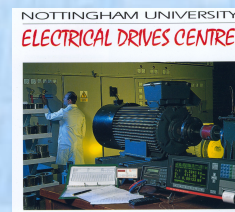
Major Research Areas

Power Conditioning/Matrix Converter

Wide Band Gap Power Electronics

Electrochemical Power Generation

Energy Storage

Signature Management Thrust Areas

Vision

Development and application of technologies which significantly reduce the multispectral signatures of Army combat systems and provide the war fighter the ability to close with and destroy the enemy without being engaged.

Major Research Areas

Novel Treatments, Techniques, and Materials for Multi-Spectral Signature Reduction Phenomenology